

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A braking system for a shaft mounted for rotation, the braking system comprising:

a brake disc coupled to the shaft for rotation therewith, the disc including a disc face having a plurality of disc plateaus positioned around the circumference of the disc, each disc plateau including a disc ramp extending between the disc face and a top surface of the disc plateau;

a brake plate mounted to be relatively stationary, ~~the brake plate thereby rotating~~ brake disc being rotatable with respect to the ~~brake disc~~ brake plate, the brake plate including a plate face positioned substantially parallel and adjacent to the disc face and including a plurality of plate plateaus corresponding to the number of disc plateaus, each plate plateau including a plate ramp extending between the plate face and a top surface of the plate plateau, the plate ramps being angled relative to the plate face at approximately the same angle at which the disc ramps are angled relative to the disc face, the plate plateaus defining recesses between consecutive plate plateaus that are dimensioned to correspond to the disc plateaus such that the disc plateaus mate with the recesses; and

a spring ~~biasing the disc face against the plate face,~~ the disc face and the plate face being biased against each other by the spring.

2. (Original) The braking system of claim 1, wherein the disc ramp is angled approximately 10° relative to the disc face.

3. (Original) The braking system of claim 1, wherein the plurality of disc plateaus comprises three plateaus.

4. (Original) The braking system of claim 3, wherein the disc ramp is angled approximately 10° relative to the disc face.

5. (Original) The braking system of claim 4, wherein the plate ramp is angled approximately 10° relative to the plate face.

6. (Original) The braking system of claim 1, wherein the disc ramp is angled at an angle of between approximately 5° and 20°.

7. (Currently Amended) A braking system for braking a rotatable shaft, the system comprising:

a ~~brake-disc~~ brake plate moveable between an engaged position and a retracted position, the ~~disc~~ brake plate including a ~~disc-face~~ plate face having a plurality of ~~disc-plateaus~~ plate plateaus positioned around the circumference of the ~~disc~~ brake plate, each ~~disc-plateau~~ plate plateau including a ~~disc-ramp~~ plate ramp extending between the ~~disc-face~~ plate face and a top surface of the ~~disc-plateau~~ plate plateau, the ~~disc-ramps~~ plate ramps being angled at an angle of between approximately 5° and 20°;

a coil that is powered to create a magnetic field to move the ~~brake-disc~~ brake plate between its engaged and retracted positions;

a ~~brake-plate~~ brake disc mounted to the shaft for rotation relative to the ~~brake-disc~~ brake plate, the ~~brake-plate~~ brake disc including a ~~plate-face~~ disc face positioned substantially parallel and adjacent to the ~~disc-face~~ plate face and including a plurality of ~~plate-plateaus~~ disc plateaus, each ~~plate-plateau~~ disc plateau including a ~~plate-ramp~~ disc ramp extending between the ~~plate-face~~ disc face and a top surface of the ~~plate-plateau~~ disc plateau, the ~~plate-ramps~~ disc ramps being angled at an angle of between approximately 5° and 20° relative to the ~~plate-face~~ disc face, the ~~plate-plateaus~~ disc plateaus defining recesses between consecutive ~~plate-plateaus~~ disc plateaus that are dimensioned to correspond to the ~~disc-plateaus~~ plate plateaus such that the ~~disc-plateaus~~ plate plateaus mate with the recesses; and

a spring ~~biasing the disc face against the plate face, the disc face and the plate face being biased against each other by the spring.~~

8. (Original) The braking system of claim 7, wherein the number of plate plateaus is equal to the number of disc plateaus.

9. (Original) The braking system of claim 8, wherein the plate ramps are angled at the same angle as the disc ramps.

10. (Original) The braking system of claim 9, wherein there are three plate plateaus and three disc plateaus.

11. (Original) The braking system of claim 10, wherein the plate ramps and the disc ramps are angled at approximately 10°.

12. (Cancelled)

13. (Original) The braking system of claim 7, wherein there are three plate plateaus and three disc plateaus.

14. (Original) The braking system of claim 7, wherein the plate ramps and the disc ramps are angled at approximately 10°.

15. (Original) A method of braking a rotating shaft, the method comprising:

attaching the shaft to a brake disc, the brake disc having a disc face with shallow disc plateaus protruding from it; and

providing a brake plate with a plate face and a spring force to selectively engage the plate face of the brake plate with the disc face of the brake disc, the plate face having shallow plate plateaus protruding from it, the spring force being chosen to permit the disc plateaus to slide over the plate plateaus in a dynamic braking portion of the method and prevent sliding of the disc plateaus over the plate plateaus in a locking portion of the method.

16. (Original) The method of claim 15, wherein there are three disc plateaus and three plate plateaus.

17. (New) The braking system of claim 1, wherein the plate face is biased toward the disc face by the spring.

18. (New) The braking system of claim 7, wherein the plate face is biased toward the disc face by the spring.

19. (New) The braking system of claim 7, wherein the spring engages the brake plate and biases the plate face toward and against the disc face.

20. (New) The method of claim 15, further comprising applying the spring force to the brake plate and biasing the plate face toward and against the disc face with the spring force.

21. (New) The method of claim 15, wherein each disc plateau includes a disc ramp extending between the disc face and a top surface of the disc plateau, and wherein the plurality of plate plateaus correspond to the number of disc plateaus and each plate plateau includes a plate ramp extending between the plate face and a top surface of the plate plateau, the disc ramps being angled approximately 10° relative to the disc face and the plate ramps being angled approximately 10° relative to the plate face.